



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09 665,184	09 15 2000	Tomowaki Takahashi	1539.1003 RE JGM DMP	4343

21171 7590 02 18 2003

STAAS & HALSEY LLP  
700 11TH STREET, NW  
SUITE 500  
WASHINGTON, DC 20001

EXAMINER

LESTER, EVELYN A

ART UNIT PAPER NUMBER

2873

DATE MAILED: 02/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/665,184

Applicant(s)

TAKAHASHI, TOMOWAKI

Examiner

Evelyn A. Lester

Art Unit

2873

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 1-9, 12-20 and 25 is/are allowed.
- 6) ☐ Claim(s) 10, 11, 21-24, 26, 27, 30-33 and 35 is/are rejected.
- 7) ☐ Claim(s) 28, 29 and 34 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 08/429,970.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Terminal Disclaimer***

1. The terminal disclaimer filed on 8-20-97 in the original patent application (i.e. 08/429,970) disclaiming the terminal portion of any patent granted this parent application, which would extend beyond the expiration date of U.S. Patent 5,636,066, has been recorded on the file of the reissue application. It has been the Patent Office position that reissue is not available to withdraw or otherwise nullify the effect of a terminal disclaimer recorded in an issued patent. Please note MPEP 1490.

### ***Claim Objections***

2. Claim 6 is objected to because of the following informalities: At line 11, a typographical error resulted during the printing of the original patent. Please note "beam sputter" should read ---beam splitter---. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application

being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 23, 26, 27, 30, 31, 33 and 35 are rejected under 35 U.S.C. 102(e) as being anticipated by Suenaga et al (U.S. patent 5,668,673).

Suenaga et al is interpreted as disclosing the claimed invention of a catadioptric projection optical system or catadioptric optical imaging system, wherein the optical system is incorporated into an exposure device, and includes a first image forming optical system having a first positive group (G1) with a refractive lens, a second positive group with a concave, reflective mirror (M1), a partial mirror or optical path deflecting member (M3), and a second image forming optical system (G3) having an optical axis along a straight line (Ax2). The partial mirror or optical path deflecting member of Suenaga et al's invention is positioned, as shown in Figure 1 for example, so as to avoid being disposed on an optical path of light which travels from the first group to the second group, and is disposed on an optical path of light which travels from the second group to the second image forming optical system, wherein the reflective surface is inclined with respect to the optical axis of the first group. This partial mirror or deflecting member is specifically positioned between the first and second groups and provides a change in direction of the light from the second group. Suenaga et al's invention also has an intermediate image (I1) of the pattern formed at a predetermined position of an optical path of light which travels from the second group to the second image forming

optical system. The second image forming optical system further forms an image of the intermediate image onto the surface of the substrate or wafer, wherein the exposure region is at a position out of an optical axis of the second image forming optical system.

With respect to claim 23, the aperture stop in the second image forming optical system is considered to be an inherent feature, as recited in the claim, because it is well established in any lens art that the edges of the lens holder(s) will naturally provide such a basic element, i.e. aperture stop.

### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 10, 11, 21-24, 26, 27, 30-33 and 35 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of U.S. Patent No. 5,999,333. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application claimed invention and the patent claimed invention are only variations of each other.

The patent claimed invention discloses the application claimed invention of a catadioptric projection, or imaging, optical system having first and second image forming optical systems, wherein the first image forming optical system has first and second groups with a partial mirror or "optical path deflecting member."

Since the portions of the specification which provide support for the patent claims may be examined and considered when addressing the issue of whether a claim in the application defines an obvious variation of an invention claimed in the patent (*In re Vogel*, 422 F.2d 438, 441-442, 164 USPQ 619, 622 (CCPA 1970)), please note in the patent at Figures 17 and 18, and their accompanying text, which in this case assists in understanding the scope of the patent claimed invention.

6. The Applicant should note that an obviousness-type double patenting would apply to the new claims, i.e. claims 26, 27, 30, 31, 32, 33 and 35, as being unpatentable over the claims of U.S. patent 5,636,066, however, since a terminal disclaimer is already of record pertaining to this patent, no further rejection is made here.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following are U.S. Patents, all directed to catadioptric optical systems at least assigned to the same assignee and/or has a common inventor with the instant invention:

Art Unit: 2873

U.S. Patent 5,251,070	Hashimoto et al
U.S. Patent 5,861,997	Takahashi
U.S. Patent 5,805,334	Takahashi
U.S. Patent 6,392,822 B1	Takahashi

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evelyn A. Lester whose telephone number is (703) 308-4943. The examiner can normally be reached on M- F, subject to I-flex schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Y. Epps can be reached on (703) 308-4883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703)308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
Evelyn A. Lester

Primary Examiner

Art Unit 2873

eal

February 10, 2003